



AMS MEAT TENDERNESS FORUM

March 27, 2007

Hilton Kansas City Airport



MARTIN E. O'CONNOR, CHIEF
STANDARDS, ANALYSIS AND
TECHNOLOGY BRANCH

AGENDA

- BACKGROUND
- CONSIDERATIONS
 - FACTORS WHICH AFFECT TENDERNESS
 - METHODOLOGIES
 - COMMENTS & FEEDBACK
- SCIENTIFIC APPROACH
 - USDA CERTIFIED/VERIFIED
- DEVELOPMENT OF WORKING GROUP
 - INDUSTRY
 - GENETICS TO RETAIL
 - ACADEMIA
 - TECHNOLOGY PROVIDERS
 - USDA



BACKGROUND



- RECOGNITION FOR NEED
 - STANDARDIZED MINIMUM MARKETING CLAIMS
 - TENDERNESS
 - GRASS FED
 - NATURAL
 - ETCETERA





Marketing Claims Update

- **Proposed 13 Livestock and Meat Marketing Claims**
 - Over 13,000 comments

- **Voluntary**

- **USDA Certified**



- **Process Verified**





Grass (Forage) Fed Claim

Grass Fed Claims—Background: This claim refers to the feeding regimen for livestock raised on grass, green or range pasture, or forage throughout their life cycle, with only limited supplemental grain feeding allowed. Since it is necessary to assure the animal's well being at all times, limited

Dec. 30, 2002

products containing lower levels of external and internal fat (including marbling) than grain-fed livestock products.

Claim and Standard:

- Grass Fed.—Grass, green or range pasture, or forage shall be 80% or more of the primary energy source throughout the animal's life cycle.



United States Standards for Livestock and Meat Marketing Claims Relating to Live Animal Production, Grass (Forage) Fed Claim

Background: For the purpose of this claim, forage is any edible herbaceous plant material, other than separated grain, that can be grazed or harvested for feeding. This claim applies to ruminant animals whose sole energy/feed source throughout their life span is derived from grass (annual and perennial), forbs (legumes, brassicas), browse, forage, or stockpiled forages. Hay, haylage, baleage, silage, ensilage and post-harvest crop residue without separated grain may also be included in the feeding regime. Consumption of seeds naturally attached to herbage, forage and browse or grain in the immature stage is acceptable. Grass and/or forage must be 99 percent or higher of the energy source consumed by the animal during its life cycle. Limited supplementation (i.e., less than one percent of the total energy consumed during the animal's lifetime) due to inadvertent exposure to non-forage feedstuffs or to ensure the animal's well being at all times during adverse environmental/physical conditions is permissible. Additionally, routine mineral and vitamin supplementation is permissible.

May 12, 2006

Claim and Standard

Grass (Forage) Fed—Grass (annual and perennial), forbs (legumes, brassicas), browse, forage, or stockpiled forages, and post-harvest crop residue without separated grain shall be at least 99 percent of the energy source for the lifetime of the ruminant specie, with the exception of milk consumed prior to weaning. Routine mineral and vitamin supplementation may also be included in the feeding regimen. Grass (forage) fed claims will be verified, as provided in 7 CFR part 62, by a feeding protocol that confirms a grass or forage-based diet that is 99 percent or higher.

Authority: 7 U.S.C. 1621-1627.

Dated: May 9, 2006.

Lloyd C. Day,

Administrator, Agricultural Marketing Service.

[FR Doc. E6-7276 Filed 5-11-06; 8:45 am]

BILLING CODE 3410-02-P



Naturally Raised

Listening Sessions

- December 11, 2006 – Washington, DC
- January 17, 2007 – Denver, CO
- January 18, 2007 – Seattle, WA



CONSIDERATIONS

- FACTORS WHICH AFFECT TENDERNESS
- METHODOLOGIES
- COMMENTS & FEEDBACK



FACTORS AFFECTING TENDERNESS

- AGE
- RATION
- GENETICS/BREED
- MARBLING
- CHILLING RATE
- IMPLANTS
- COOKING METHOD & DONENESS
- INGREDIENT ENHANCEMENT
- AGING POSTMORTEM
- MUSCLES
- ULTIMATE PH
- PROCESS STRATEGIES
- MORE...



SCOPE OF THE CLAIM “TENDERNESS”



METHODOLOGIES

- BELT GRILL COOKERY
- OPEN-HEARTH ELECTRIC GRILL COOKERY
- WARNER-BRATZLER SHEAR FORCE MEASUREMENT
- LONGISSIMUS SLICE SHEAR FORCE MEASUREMENT
- MORE...



COMMENTS & FEEDBACK

- RELATIONSHIP BETWEEN
METHODOLOGIES SHOULD BE DEFINED
 - $WBS = (0.106283 \times SSF) + 2.27$
- STANDARD SHOULD BE WORTHWHILE
- TIERED CERTIFICATION
- THE AMSA TENDERNESS GUIDELINES
1995



COMMENTS & FEEDBACK (CONT'D)

- APPROPRIATE AND DEFINITIVE SAMPLING IS NEEDED TO DETERMINE EXPECTED VARIATION
 - HOW ARE ANIMALS SORTED (GRADE, WEIGHT, AGE, LOCATION, AFFILIATION, NATIONAL POPULATION, BREED)
 - THIRD PARTY STATISTICIAN NEEDED
 - WHAT WILL THEN BE THE APPROPRIATE SAMPLE SIZES
- DIFFERENCES BETWEEN A POTENTIAL “CERTIFIED TENDER” PRODUCT AND A “PROCESS VERIFIED” PRODUCT THAT INCLUDES TENDERNESS TESTING
- THE ACCEPTED STANDARD SHOULD SHOW HIGH CORRELATION TO SENSORY PANELS AS CERTAIN LEVELS OF TENDERNESS CAN BE DISCERNED BY THE GENERAL POPULATION





TENDERNESS

SCIENCE THROUGHOUT THE SUPPLY CHAIN

- DR. JEFF SAVELL MODERATOR
 - SCIENTIFIC RESEARCH
 - CONSUMER STUDIES
 - OPEN DISCUSSION

